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Simulation improves medical students' confidence in recognising paediatric safeguarding issues

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Published Online First 1 December 2018**INTRODUCTION**

Child protection is an important responsibility of doctors worldwide. In the UK, the General Medical Council places a duty on doctors to protect the well-being of children and young people,¹ and all doctors are responsible for recognising signs that a child is suffering abuse or neglect. Child safeguarding awareness is essential for most medical careers and forms an important part of the medical student undergraduate curriculum at the University of Bristol. At South Bristol Academy, this is currently delivered via a half-day core workshop on child protection, but students often have no experience of the practical application of child protection in the workplace. South Bristol Academy recently introduced a paediatric simulation training day for fourth-year medical students; we added a simulated child protection scenario into this training day to assess its use in teaching undergraduates about child safeguarding.

Child protection is a challenging area of paediatric practice and we hypothesised that simulation-based safeguarding training might provide students with an opportunity for experiential and immersive learning. Simulated child protection scenarios have been used to teach paediatric trainees and affiliated members of healthcare staff about child safeguarding,² and there is evidence that simulation is effective when used to teach healthcare professionals about child protection,³ but there is as yet no published literature on its use in teaching undergraduate students.

METHODS

A total of 118 fourth-year medical students rotating through paediatrics attended the simulation day in groups of 6–9 over a 9-month period. As part of the day they were given a presentation on management of paediatric trauma where the importance of considering non-accidental injury was highlighted. The final scenario of the day was a trauma scenario involving a 13-month-old child with a severe head injury. A high-fidelity mannequin was used to portray the child, and the students were asked to simulate the trauma team. They were given a history that the child had climbed onto a kitchen counter and fallen head-first onto a stone floor. The mannequin had moulage representing an occipital contusion, swelling and bruising to the proximal femur and fingertip bruising to the shoulder. The simulation lasted 20 min, during which time the mannequin deteriorated by demonstrating bradycardia, hypertension and a fixed dilated pupil. The simulation was then followed by a 20 min debrief.

We documented whether students discovered the mannequin's additional injuries on primary or

secondary survey, and whether they voiced any concerns about potential non-accidental injury during the scenario or in the debrief afterwards. If the students did not note the child protection concerns, these were brought to their attention by faculty at the end of the debrief. This was then followed by a discussion on child safeguarding. We also collected feedback about self-appointed confidence scores in identifying child protection issues before and after the session.

RESULTS

A total of 118 students attended the simulation morning in 16 different groups. Nine groups attended before their compulsory child protection workshop and seven groups afterwards. All groups discovered at least some of the mannequin's additional injuries, but only 2/16 groups articulated the possibility of non-accidental injury during the scenario. Both of these groups had already attended the child protection workshop. Five additional groups volunteered suspicions of a safeguarding issue during the debrief; none of these groups had yet attended the workshop.

Feedback on confidence scores was collected from 104 students. The average confidence score in identifying child safeguarding issues was 2.4 pre-simulation (on a Likert scale of 1–5) and 3.7 post-simulation, with an average increase of 1.3 points. Confidence scores had increased in 88/104 students (94.6%) post-simulation, with 16 students (15.4%) reporting no change. Additionally, students frequently commented in the feedback that this had been the most useful simulation of the day.

DISCUSSION

We chose to focus on the recognition of child protection concerns, rather than on management as has been reported previously, as safeguarding management and local procedures are taught elsewhere in the paediatrics curriculum. Previous groups³ used half-day sessions with child actors to teach safeguarding to postgraduates, but we felt this might be somewhat intimidating for medical students as their first experience of child protection so chose to use a single scenario with a mannequin instead.

At 13 months of age, it is unlikely a child would be developmentally able to climb onto a counter, and the child in this scenario would be unlikely to sustain an occipital head injury by falling forwards onto the floor. The history described would also not account for a femoral fracture or fingertip bruising to the shoulder. We therefore felt there were enough concerns in the scenario to raise the question of non-accidental injury. However, the students did



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not commonly acknowledge the safeguarding element within the acute scenario. We allowed time in the debrief to discuss the injuries sustained by the child, to allow students additional time to raise safeguarding concerns, but still the majority did not voice the potential of non-accidental injury until this was raised by faculty. However, we found that the scenario generated useful discussion on non-accidental injury regardless of whether the groups recognised the safeguarding element. Unsurprisingly, identification of child protection issues was somewhat improved in groups who had already attended a child protection workshop, but was still by no means universal.

94.6% of students showed increased confidence scores in identifying child protection issues after the session. Confidence scores might not be an accurate reflection of competence, but this does suggest that simulation is an effective way of teaching medical students about child safeguarding. Scores rose an average 1.3 points on a Likert scale of 1–5, but overall, post-simulation scores still showed room for improvement at 3.7 points. This highlights the need for ongoing undergraduate safeguarding training.

It is possible that some students considered non-accidental injury during the scenario but did not feel confident enough to voice their concerns about it; however, some students reported in their feedback that they were distracted by the acute medical management of the simulated patient so had missed the safeguarding element. The fault might have been with the scenario, which was somewhat complex, but this reflects child protection in the workplace where acute medical problems and unexpected safeguarding issues often present simultaneously. Our aim in adding this scenario was to teach students to recognise both; our study adds evidence that child protection and management of paediatric emergencies can be effectively taught alongside one another.

CONCLUSION

From our results, safeguarding simulation is effective and well received by medical students. Undergraduate medical

students would benefit from more exposure to simulated practical child protection training in order to develop skills in recognising safeguarding issues. Further research is required to assess whether this leads to improved detection of child protection issues in the workplace post-qualification.

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Contributors AM-Y developed the concept for the report, wrote the child protection safeguarding scenario and implemented it while teaching on the simulation days. She collated the student feedback for the project and wrote the article. AK was the overall supervisor for the project.

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